



Editor's Note

A number of members have commented on the lack of a Newsletter during 1991. For this your Editor apologizes: the demise of a computer, surgery and convalescence, and a dearth of contributions, have all played their part. This double issue for 1991 is not intended as a precedent. Spring and Fall issues for 1992 are already planned.

1991 a Busy and Enjoyable Year

This year those C.C.S. members who have turned out for the Spring and Fall Tours have had a thoroughly enjoyable time: along the Welland River on 25 May, and to various sites along the Erie Canal 25-26 October (hosted by the Canal Society of New York State). For those not able to join us, there are accounts of these tours elsewhere in the Newsletter.

The C.C.S. Board has spent many hours revising the Constitution and By-Laws of the Society: the results of hours of discussion will be presented at the A.G.M., during the Victoria Day week-end in May. And of course, many hours have also been spent in planning the 1992 tours for your enjoyment.

ADVANCE NOTICE:

1992 Spring Tour - 15-17 May, destination, the Rideau Canal, based at Smith's Falls, Ontario.
RESERVE THIS WEEK-END NOW!

NEW MEMBERS 1991

- Grant E. Black, Fonthill, Ont.
- David G. Barber, Hopedale, Mass.
- K.M. Clifford, Niagara Falls, ON
- Robert L. Damery, New Smyrna Beach, Fla.
- Alan Dietch, Foster City, CA
- Thomas E. Floyd, Huron, Ohio
- Ross Fuller, Churchville, PA
- Mrs. Alixe Gore, St. Catharines
- Linda J. House, Sommerville, NJ
- Keith W. Kroon, Rochester, NY
- Bev Morant, Sierra Madre, CA
- Mrs. A. O'Connell, St. Catharines
- Dr. Eric E. Segeler, Chicago
- W.L. Snider, Hastings, Minn.
- Robert Sparks, Toronto
- Susan Stanley, Montreal
- Mr. & Mrs. A. Sweeton, Canton, CT
- Carl & Collette Wampole, Newconset, NY
- Langine Waskiewicz, Rome, NY
- Robert K. Weill, Lewiston, NY

SPRING Field Trip 1991: Welland River (Chippawa Creek)

Fine weather greeted participants for the tour on 25 May. After leaving Brock University, members travelled to Chippawa (once the terminus of the first Welland Canal and now part of the city of Niagara Falls) and the mouth of the Chippawa Creek/Welland River. From here we traced the course of the river westward.

Among the many highlights of the day was a stop at Port Robinson, where we examined a partially filled lock that once connected the Welland Canal to the Welland River. In fact, the river from Port Robinson to Chippawa was part of the original canal route, and remained a navigation channel through most of the 1800s.

Then on to the City of Welland, where we admired the magnificent stone aqueduct of the Second Welland Canal, used as a swimming pool until quite recently.

Lunch was picnic style on benches beside the river, at Gladman's Park in the village of Wellandport. Then followed a tour of Wellandport, led by C.C.S. President **John Burtniak**.

Later that afternoon, we left the Welland River to drive south to the Feeder Canal at Wainfleet, then back along the Feeder to Welland. The Feeder, dug in 1829, provided Grand River water for the first Welland Canal. The Feeder ran from Dunnville to join the main canal between Welland and Port Robinson. As it is now the only remaining part of the

original canal system, it is a tangible reminder of a great and difficult work undertaken by pioneer Canadians.

Each participant in the tour was given a booklet compiled by John Burtniak, containing background information and pictures of each site visited. Also included were several early 19th century Welland River poems, located by C.C.S. member **Colin Duquemin**.

The C.C.S. owes a debt of gratitude to **John Burtniak**, for organizing and leading another excellent field trip.

Sherman Zavitz

INFORMATION WANTED

C.C.S. members **Bobbie Styran and Rob Taylor** have learned recently that their proposal to The Champlain Society, for a volume of documents on the Welland Canal, has been accepted. The projected volume will appear in the Society's Ontario Series later in the 1990s.

The authors will welcome any original material, such as letters and diaries, by or about people involved with the Canal. Photographs, especially those identifying individuals, would also be most welcome. Material dealing with the experience of immigrants would be of particular value. It is intended to place a similar advertisement in other relevant publications.

Please send material to:

**Prof. R.R. Taylor
History Department
Brock University
St. Catharines, L2S 3A1**

FALL TOUR 1991: The Erie Canal

We left Brock in pouring rain, Friday afternoon, 25 October, bound for Newark, NY, where we joined members of the Canal Society of New York State. Our hosts had organized a most enjoyable and informative week-end, and, in true canal spirit, had even persuaded the weather to cooperate.

On the Friday evening we were given an excellent slide lecture, describing the sites we were to see during the following two days.

The field trip on Saturday took us by and to a number of sites connected with the original Erie Canal ("the Ditch", opened 1824), the "enlarged Canal" of the 1840s and 50s, and the 20th century Erie Barge Canal. The sun shone warmly as three bus-loads of eager canal buffs swarmed about the various locks, and other sites, whose history was described in a first-rate Guide compiled by **Tom Grasso** and **Craig Williams**, the tour organizers. Tom and Craig also took turns with a loud-hailer to provide more on-site information, and to answer our many questions.

Before and after the evening banquet, displays by various groups, and the chance to mingle with our American friends, added much to our pleasure.

Sunday morning saw us aboard the SENECA CHIEF for a morning on the Erie Barge Canal. As we drifted along, appropriate commentary (and musical entertainment!) were provided by Tom and Craig, and our jovial captain. None of use will forget the warning cry - "LOW BRIDGE" - at intervals!

Lunch on board was timed to occupy the less interesting part of the trip, while gathering clouds threatened but did not dampen, our spirits. Typical of the superb organization of the week-end, the rain began only as we hastened from the SENECA CHIEF to our waiting homeward-bound bus!

At the Saturday night banquet, C.C.S. President **John Burtniak** thanked our hosts, and issued an invitation to the Canal Society of New York State to visit the Welland Canals, perhaps in the fall of 1992. While some of their members have visited the Welland, many have never had a comprehensive tour, and welcomed our offer. For our part, the C.C.S. looks forward to the opportunity to both share our canal heritage, and repay such well-planned and generous hospitality. Further information as plans mature!

St. Catharines Museum Notice

Most of the Museum's extensive archival holdings are again available to researchers, in the new facilities at Lock 3. Access to part or all of the collections of Photographs, Maps, Microfilm, Archives, Periodicals and Library can be provided as follows:

Mon., Wed., Friday, 1.30 - 5.00

Other parts of the collection will be made available as soon as possible after new holdings equipment is installed.

Orders are again being taken for copy photographs from the Photograph collection. Please allow three weeks for delivery.

Spring Meeting and Tour 1992

As indicated above, plans are under way for our delayed visit to Smith's Falls and the Rideau Canal. Of special interest will be the museum complex which opened last summer. In 1992 the grand opening ceremonies for the Rideau Canal system (operated by Parks Canada), will be held in Ottawa on the Victoria Day weekend, the traditional opening date. This year the opening will also mark the 125th anniversary of Confederation. Special activities will also be held at Smith's Falls on that weekend.

For some time we have been hoping to visit this area, awaiting only the Museum's opening, so we look forward to our visit, and to the hospitality of Parks Canada and the town of Smith's Falls.

The meeting and tour will likely be spread over the three day week-end, 15-17 May. Watch for more details in the next issue of the Newsletter!

SKIP GILLHAM HONOURED

The many friends and admirers of Skip Gilham's long-running column in the St. Catharines Standard, "Ships that ply the Lakes" will be delighted to know that on 9 January 1992 Skip was to be honoured by a reception held at the St. Catharines Museum, Lock 3, sponsored by the Welland Canals Foundation in association with Port Weller Dry Docks and the St. Catharines Standard. The occasion was the publication of the 1000th edition of Skip's popular column. Our best wishes to Skip!

The IWA (Great Britain) returns!

The 1992 tour for members of the Inland Waterways Association will bring them back to North America (they visited Canada in Sept. 1985). They plan to visit Lowell, Mass., Scranton and the High Falls Museum, the Roebling aqueduct, Easton canal museum, parts of the Morris Canal, the Patowmack river, Chesapeake & Ohio Canal, Pennsylvania canal with its restored inclines, and the cities of Pittsburgh, Cleveland and Buffalo. Included is six days on the Erie from Buffalo to Albany, with a stop at Rochester.

According to their itinerary, they plan also to visit the Welland, although we have no date as yet, but probably near the end of June.

The **American Canal Society**, as well as several state canal societies, are helping to organize the tour, which will be led by their dauntless guide, **Ron Oakley**.

Many C.C.S. members will recall with mixed feelings the IWA visit to our area in 1985: on the hottest and most humid weekend of that summer! Despite the weather, the visit was a great success, and we look forward to renewing acquaintance with old friends, either on the Welland, or by joining in some of their activities on the Erie. Again, further information as it becomes available.

WANTED!

Submissions for a new masthead for the Newsletter. Please send any designs (preferably line drawings or sketches) to the Editor.

Canadian Nature Tours: Lakes, Loons and Locks, 1-7 June 1992

Spend a leisurely week on board a houseboat in the Peterborough area, poking into marshes and bays, negotiating Trent Waterways locks, birdwatching from the top deck, botany hikes on shore, and the company of like-minded souls.

George Fairfield and Judy Eising will navigate the shallows and channels of the lake system, and share their knowledge of flora (Judy) and fauna (George). Accommodation limited to 10, \$825 (deposit \$150).

Canadian Nature Tours #12,
Federation of Canadian Naturalists,
355 Lesmill Road,
Don Mills, Ont. M3B 2W8

C.C.S. Archives

While our society is just approaching its tenth anniversary, it has already produced and accumulated a number of records, as part of its operation and organization. The Board, concerned that these records (documenting the Society's development and activities) should be preserved and housed in a proper archival repository, has decided that our Archives should be in the custody of the Brock University Library's Special Collections.

St. Catharines is the official headquarters of the Society, and the Brock Library's Special Collections has, among various specialities a particularly strong holding of Canadian canal material, especially relating to the Welland Canals, the St.

Lawrence Seaway and other Ontario canals. A not insignificant collection of material on the Erie, and other New York State canals, is also available, for comparative purposes.

Canal-related items continue to be sought out, and additions are made regularly. As well, and a most important consideration, the Library's Special Collections can provide the proper archival care for CCS material.

In January 1992 the Library's Special Collections will be relocated to new and expanded quarters on the 10th Floor of the Arthur Schmon Tower. The new location will provide an archival-quality environment, with proper humidity, temperature and air-conditioning control, storage space and work areas, security and staffing. It is appropriate, then, that the CCS Archives should be deposited there. The Library's Special Collections are in the care of **John Burtiniak**, current C.C.S. President who, as Special Collections Librarian and University Archivist, has full responsibility for the development and maintenance of the collections.

For further information, contact John at (416) 688-5550, ext. 3264, or FAX (416) 968-5490.

ALSO WANTED:

The Newsletter Editor is always in need of material, with or without illustrations (preferably sketches or line drawings), concerning canals, waterways, or any related matters. Excerpts from the Webb/Dumalo paper (see pp. 6-8) will not last forever!

The Sault Ste. Marie Canal; The St. Lawrence Canals (Part 1)

[**Editor's Note:** This is the sixth installment from a paper entitled "The History of Canadian Inland Navigation System," presented to the Canadian Society of Civil Engineers Centennial Conference in Montreal, May 1989. The authors, C.C.S. member **Walter Webb** and **E. Dumalo**, have graciously agreed to the use of parts of the paper in Canals Canada.]

The Sault Ste. Marie Canal

By 1668 French missionaries and fur traders had established a base at what was to become Sault Ste. Marie, and it became a busy portage until the end of the eighteenth century. At about that time Gother Mann of the Royal Engineers surveyed the area and noted a suitable site for a canal.

In 1797-98 the North West Company constructed a canal with a timber lock. It is reported [Osborne and Swanton, 1986] that in 1802 Captain R. Bruyères, R.E., inspected the canal and described the lock as having a lower gate that lets down by a windlass and two upper folding gates. The canal was 2580 feet (787 m) long and the lock was 38 feet (11.5 m) long by 8 feet 9 inches (2.7 m) wide with a depth of water of about 1 foot 6 inches (0.5 m).

In 1814 the Americans captured this site and destroyed the lock as well as the trading post. After the end of hostilities these facilities were rebuilt but little other improvement was made, and all further canal work was restricted to the American side of the river until 1887, when another Canadian canal was built.

The St. Lawrence Canals

Upper Canada formed a commission in 1833 to have a look at waterways. With the Montreal-Kingston route via Ottawa hearing completion, and the linking of Lakes Erie and Ontario via Chippewa in 1829, this was timely.

Montreal, in Lower Canada, would surely have experienced slower growth if a start on improving the St. Lawrence river system with the Cornwall Canal had not been undertaken, this because the Erie Canal was in operation since 1825. Although the Erie Canal was only 4 feet (1.2 m) deep in comparison to the Welland's 8 foot (2.4 m) draught, it did provide the first uninterrupted route over water from Lakes Huron and Michigan to New York City.

The Cornwall Canal, the first of the so-called St. Lawrence Canals, handled the worst section of the river, namely the Long Sault rapids. Construction started in 1834, just after the Ottawa-Rideau Waterway was opened. The standard, recommended by the 1833 Commission for this generation of canals, called for lock dimensions of 200 x 45 feet (61 x 13.7 m) and 9 feet (2.7 m) of water over the sills. These dimensions reflected the growth in size of steam powered vessels, the first appearing in Lake Ontario was the FRONTENAC in 1816. This ship was a schooner with three masts and side paddlewheels. The early steamers were either sidewheelers or sternwheelers, requiring, in any case, more channel width than equivalent sailing vessels. However it would take some 60 years after the appearance of the FRONTENAC before steam would be close to overtaking sail. Many of the wooden sailing ships would make it into the next century.

By 1851 the St. Lawrence river system achieved the standards set out by the commission, and thereafter overtook the Ottawa-Rideau route to become the major waterway from Montreal to Lake Ontario. By the time thought was given to yet another generation of Canadian Canals the nine foot system of the St. Lawrence Canals almost matched the Welland Canal tonnages.

The Cornwall Canal was 11 miles (17.7 km) long and overcame an elevation differential of 48 feet (14.6 m) and was opened in June 1843. There were seven locks in all. It was the first of the so-called Ontario St. Lawrence Canals.

The second phase in this generation of canals was to start in 1842 to connect Lake St. Francis with Lake St. Louis. This link would be called the Beauharnois Canal. This phase was given an earlier impetus by Lord Durham, Governor of Canada, who was a proponent of water transportation. On his recommendation, Upper and Lower Canada were united in 1841. Upper and Lower Canada went into union with an uncompleted series of canals, a combined debt of £1,325,000, and no credit rating. An imperial loan of £1,500,000 was to be used to retire the provincial debt, but in large thanks to Governor Sydenham, the successor to Lord Durham, these monies were dedicated instead to the completion of the St. Lawrence Canals. By 1842 a Board of Works was formed for the United Province of Canada, which Board was to be entrusted with all public works including canals.

The Beauharnois Canal was built on the south side of the river, thereby replacing the military canals which were on the north side. The military establishment

objected to going to the south side of the river because of its nearness to the American border. The victorious battles at Chrysler's Farm and Chateauguay, no doubt had become distinct memories, and the Board prevailed. The new canal overcame the 82.5 feet (25.2 m) between the present-day towns of Valleyfield and Melocheville. This was accomplished by nine locks over a distance of 11.5 miles (18.5 km). Several years later other supplementary works were necessary, because at times there was not enough water depth at the Lake St. Francis entrance. These works entailed the construction of two dams joining two islands to the shore, as well as dykes along the south side of the lake. In some years, ice lingered at this entrance as late as May. The next generation of canals would revert to the north shore. The Beauharnois Canal was completed in only three years, which was noteworthy in those days.

In 1843, the same year that the Cornwall Canal was opened, an updating of the Lachine Canal was started under the aegis of the Board of Works. This third phase took five years to complete. The number of locks was reduced from seven to five, with special treatment by way of water depth being given to the first two locks and to part of the reach above the second lock. The water depth was 15 feet (4.6 m) over the sills in this area and 9 feet for the rest of the locks. The deeper draught at the beginning of the canal afforded ocean vessels direct access to the fledgling industries springing up in lower Montreal. It was this refurbishment which accentuated the economic potential of the canal, for the banks of the canal soon became sites for numerous mills and factories. Many of these installations are still there. Along with this industrial

growth, working class communities such as Griffintown were built, home to the City's Irish community. The same first two locks at the lower end were eventually lengthened and deepened, and were in service right up to the decommissioning of the Lachine Canal. The canal was about 9 miles (14.5 km) long and overcame the 46 foot (14 m) drop between Montreal and Lake St. Louis.

There were still some white waters to overcome upstream of the Cornwall Canal, which waters could be challenged when sailing downstream, but required cargo unloadings in the upstream direction. In 1846 the last phase of the St. Lawrence Canals was started. It consisted of a series of canals, notable the Farran Point Canal, the Rapids Plat Canal and the Galops Canal. These canals needed six locks to overcome the drop over 30 miles (48.3 km) of river, and were fully operational by 1851. They came to be known as the Williamsburg Canals. It was safe sailing now from Montreal to Cardinal and thence to Lake Ontario.

While the construction of the 9 foot canal system was a boon to navigation on the Great Lakes and St. Lawrence, the railways were providing intense competition. The canal systems were becoming less competitive. On both sides of the border several railroads and waterways were competing in a limited market. The sources of supply were essentially in the American middle west.

It was not until past the mid mark of the 19th century, with the push to the far west in British North America as well as in the United States, that a broader base for transportation was becoming a

reality. To its credit, the Grand Trunk Railway, even though near bankruptcy because of the saturated market prior to the major thrusts to the far west, decided not to retrench, but to extend east and westwards in a transcontinental spirit. This, no doubt, provided an incentive for the Province of Canada to think of transportation in the context of a transcontinental Canada.

It was not until after Confederation in 1867 that the Dominion of Canada had another serious look at canals. The essential nature of the St. Lawrence-Welland route, in North America's transportation infrastructures, was recognized early on after Confederation. By 1870 another commission was put together to study all canals in the new Canada, its recommendations to parliament having been made the following year. All locks from the Lachine Canal to the Lakehead were to be 270 x 45 feet (82.3 x 13.7 m) with 12 feet (3.7 m) of water over the gate sills. By 1873 the Department of Public Works (DPW) authorized the implementation of the new standard.

[The story of the St. Lawrence Canals will be continued in the next issue of Canals Canada.]

To all our members from all of us on the Board:

Best wishes for 1992! Smooth sailing! We wish that all your voyages may be pleasant, and all your ventures profitable!

The Canadian Canal Society

Executive Officers for 1991-92

Past President:	George Hume
President:	John Burtiak
Vice-President:	Sheila Wilson
Secretary:	Robert Voaden
Treasurer:	Agnes Wilson

All correspondence for the
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Contributions for **Canals Canada** should
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 35 Towering Heights Blvd., #509
 St. Catharines, Ontario
 L2T 3G8

APPLICATION FOR MEMBERSHIP

Please enrol me as a member of the **Canadian Canal Society**
 I enclose my membership fee of \$ _____

Individual	\$ 10.00
Family	15.00
Institution	25.00
Contributing	25.00 or more

NAME _____

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Please mail cheques payable to the **Canadian Canal Society** (in Canadian funds) with
 application to:

Secretary
 Canadian Canal Society
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 St. Catharines, Ontario,
 L2R 7K1